ISO Central Secretariat

date
1999-10-20

reference
ISO/VOTE/dn

SECRETARIAT OF ISO/TC 184/SC 4
NIST/MSID
Metrology, Room A127
GAITHERSBURG, MD 20899,
USA

Dear Sir or Madam,

ISO/DIS 10303-43

We have pleasure in enclosing the table of replies indicating the result of voting on the above draft, together with copies of all comments received. This table of replies will constitute annex A to the report of voting referred to in the ISO/IEC Directives (1995), Part 1, sub-clause 2.6.5.

The secretary is kindly requested to arrange for the attached form 13 'Report of voting' to be completed by the chairman to show the action to be taken with regard to further processing of this draft. Your attention is drawn to the ISO/IEC Directives (1995), Part 1, sub-clause 2.6.4 setting out the options available.

At the same time, the secretary is requested to prepare annex B to the report of voting, reproducing the comments received and giving the observations of the secretariat on each. For this purpose, please use the forms 'Report of voting'/Annex B which have been supplied to you separately.

In accordance with the ISO/IEC Directives, the Central Secretariat is required to circulate the full report to the P-members of your committee within three months. It is therefore essential that we receive from you the completed form 13, including annex B (comments and secretariat observations) by 2000-01-20.

In the case of a decision by the chairman to proceed with the publication, the FDIS should be prepared by the secretariat without delay, and should preferably be forwarded to the Central Secretariat at the same time as the report of voting.

Yours faithfully,

Gabriel Barta
Standards Department

cc. Mr. D. Wandmacher (Chairman of ISO/TC 184/SC 4) (with comments)
Mme C. Hermetet-Filez (Secretary of ISO/TC 184) (without comments)

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION • МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ • ORGANISATION INTERNATIONALE DE NORMALISATION

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DIS TABLE OF REPLIES / 1999-10-20 / TABLEAU DES REPONSES DIS

TC 184/SC 4
ISO/DIS 10303-43

VOTING BEGAN ON/DEBUT DU VOTE:1999-05-06
TIME LIMIT FOR REPLY/DELAI:1999-10-06

TITLE: Industrial automation systems and integration -- Product data representation and exchange -- Part 43: Integrated generic resource: Representation structures

TITRE: Systèmes d'automatisation industrielle et intégration -- Représentation et échange de données de produits -- Partie 43: Ressources génériques intégrées: Structures de représentation

MEMBER BODY/COMITE MEMBRE		APPROVAL/APPROBATION	DISAPPROVAL/DESAPPROBATION	ABSTENTION		MEMBER BODY/COMITE MEMBRE		APPROVAL/APPROBATION	DISAPPROVAL/DESAPPROBATION	ABSTENTION	
Australia (SAI)	P	X				Norway (NSF)	P	X			
Brazil (ABNT)	P	X				Poland (PKN)		X			
Canada (SCC)	P					Portugal (IPQ)	P			X	**
China (CSBTS)	P	X				Russian Federation (GOST R)	P	X			
Czech Republic (CSNI)	O	X				Slovenia (SMIS)		X			
France (AFNOR)	P	X			*	Spain (AENOR)	P	X			
Germany (DIN)	P	X				Sweden (SIS)	P	X			
Italy (UNI)	P	X				Switzerland (SNV)	P			X	**
Japan (JISC)	P	X				United Kingdom (BSI)	P	X			*
Korea, Republic of (KATS)	P	X				USA (ANSI)	S	X			*
Netherlands (NNI)	P	X									

TOTAL 18 2 0

* = Comments / commentaires
** = P-member having abstained and therefore not counted in the vote / Membre (P) s'abstenant de voter; n'est donc pas compté dans le vote

P-MEMBERS VOTING: / MEMBRES (P) VOTANT:	IN FAVOUR OUT OF / EN FAVEUR SUR		REQUIREMENT / CRITERE
15	15	= 100.00%	>= 66,66%

MEMBER BODIES VOTING: / COMITES MEMBRES VOTANT:	NEGATIVE VOTES OUT OF / VOTES NEGATIFS SUR		REQUIREMENT / CRITERE
0	18	= 0.00%	<= 25%

THIS DRAFT HAS THEREFORE BEEN APPROVED
in accordance with the ISO/IEC Directives, Part 1, sub-clause 2.6.3.

CE PROJET EST DONC APPROUVE
selon les Directives ISO/CEI, Partie 1, paragraphe 2.6.3

REPORT OF VOTING ON ISO/DIS		
Closing date of voting	ISO/TC /SC	
	Secretariat	

1 Result of the voting

The above-mentioned document was circulated to member bodies on the date shown in annex A, with a request that the Central Secretariat be informed whether or not member bodies were in favour of registration of the DIS as a Final Draft International Standard.

The replies listed in annex A have been received.

2 Comments received

See annex B. (This annex is circulated only to the P-members of the committee but is available to any other member body on request.)

3 Observations of the secretariat

4 Decision of the Chairman

☐ The DIS has been approved in accordance with the conditions of 2.6.3 of part 1 of the ISO/IEC Directives and will be submitted without change, other than editorial, for circulation as an FDIS to all member bodies.

In the light of technical comments received,

☐ a new DIS will be submitted to the Central Secretariat for circulation to the member bodies.

☐ a new committee draft will be distributed for comment.

☐ the DIS and comments will be considered at the next meeting.

Signature of the secretary	Signature of the chairman
Date:	Date:

FRENCH BALLOT
on ISO/DIS 10303-43

Annex

FRANCE approves the technical content of ISO/DIS 10303-43 with the following technical comment:

ISSUE NUMBER: FRA-1
ORIGINATOR: P. Huau,GOSET,pascalhuau@csi.com
DATE:
SENTENCE/ABSTRACT/KEYWORD:
DESCRIPTION:
Font problem for the text defining the attribute value_component.

CLASSIFICATION1: minor, editorial
CLAUSE: 4.4.18

BALLOT RESPONSE AND UK COMMENTS ON ISO/DIS 10303-43

STEP - IGR: Representation structures

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1. INTRODUCTION

This document presents the proposed UK vote, comments and recommendations on ISO/DIS 10303-43 : IGR: Representation structures

2. VOTING RESPONSE

The UK votes **APPROVAL** of ISO/DIS 10303-43 with the following comments.

3. TECHNICAL COMMENTS

ISSUE NUMBER UK-43-01

AUTHOR: Ray Goult

CLAUSE: 4.4.3 Founded_item

CLASSIFICATION: Minor Technical

DESCRIPTION: The note is misleading in the extreme. A founded item is NOT semantically equivalent to a representation item, if it was it could be used on any occasion when a representation item is required. The whole point about a founded item is that it requires a founded context and it provides a PARTIAL definition of a representation_item.

I suggest removing this note and replacing it with the much more relevant note:

NOTE: A geometric_representation_item may be founded via a reference to a founded_item having a representation_item as an attribute.

ISSUE NUMBER UK-43-02

AUTHOR: Ray Goult

CLAUSE: 4.4.14 Representation_relationship

CLASSIFICATION: Minor Technical

DESCRIPTION: The semantics of this entity seem to have changed considerably since the IS publication. The example certainly corresponds to a way in which the entity has been used (in my opinion mis-used) in some AP applications. The usage in the exaple seems to be contrary to the statement `one representation is not made part of the definition of the other by participation in a representation_relationship' since the inference in the example is that R3 somehow corresponds to the entire house. Questions brought to mind by this example are:

What, if anything, would a representation relationship between R2 and R3 mean?

If I want to create an instance of shape_definition_representation for the shape of the complete house what should be the used_representation ?

R3 or something else which explicitly contains G1 and G2?

I note that EXAMPLE 2 in representation_relationship_with_transformation reverts to the original semantics of representation_relationship and relates two representations with a

genuine semantic content each providing a complete set of representation_items. Following this model R3 would in fact contain G1 and G2 as explicit items.

4. EDITORIAL COMMENTS

ISSUE NUMBER UK-43-03

AUTHOR: Ray Goult

CLASSIFICATION: Minor Editorial

DESCRIPTION: The pagination of the main part of the document is wrong with odd and even pages on the wrong sides of the paper. This could be corrected either by eliminating the blank page viii, or by introducing a blank page as backing for the ISO cover sheet.

ISSUE NUMBER UK-43-04

AUTHOR: Ray Goult

CLAUSE: Foreword

CLASSIFICATION: Minor Editorial

DESCRIPTION: The boiler plate text should be amended to take account of the new name `Integrated generic resource' for the 40 series parts. I suggest

The parts of ISO 10303 fall into one of the following series: description methods, integrated generic resources, application interpreted protocols, ...

This part of ISO 10303 is a member of the integrated generic resources series. The integrated generic resources specify a single conceptual product model.

ISSUE NUMBER UK-43-05

AUTHOR: Ray Goult

CLAUSE: 4.4.18 Value_representation_item

CLASSIFICATION: Minor Editorial

DESCRIPTION: Something very strange has happened to the font at the beginning of the value_component attribute description.

ISSUE NUMBER: USA-43E2-1
AUTHOR: USA
CLAUSE: 4.4.9, page 18
CLASSIFICATION: Technical

DESCRIPTION:

The use of the basic_attribute_schema constructs from Part 41 to assign attributes to the representation entity causes ambiguity in APs that use this edition of this part, in addition to requiring unnecessary work-arounds to remove the ambiguity.

The DERIVED attributes in representation id and description cause the entities id_attribute, and description_attribute to be implicitly interfaced when it is interfaced (explicitly or implicitly) into the AIM schema. This structure causes ambiguous semantics and extra unnecessary work for AIM developers (if they even detect the problem).

The work-around in the APs to resolve the semantics, of course, is to explicitly interface the id_attribute and description_attribute entities simply so a RULE may be written to disallow their existence in a data store that complies with the schema. The necessity for this work-around indicates a poor solution.

PROPOSED SOLUTION: (optional)

Remove the DERIVE clause.

RESOLUTION:

ISSUE NUMBER: USA-43E2-2
AUTHOR: USA
CLAUSE: 4.4.3
CLASSIFICATION: Technical

DESCRIPTION:

IP1 of founded_item does not define what it means to "participate directly or indirectly in the definition of a representation_item". Specifically, indirect participation in the definition of a representation_item is ambiguous.

PROPOSED SOLUTION: (optional)

RESOLUTION:

ISSUE NUMBER: USA-43E2-3
AUTHOR: USA
CLAUSE: 4.4.3
CLASSIFICATION: Technical

DESCRIPTION:

It is not clear what the intent of the first sentence of the

note is attempting to convey. The sentence describes the founded_item as "semantically equivalent" to a representation_item. This is an incorrect statement for at least the following reasons:

A founded_item

1. may not be an item in a representation.
2. does not have a name.
3. is not an independent element of representation.

PROPOSED SOLUTION: (optional)

Remove the first sentence from the note.

RESOLUTION:

ISSUE NUMBER: USA-43E2-4
AUTHOR: USA
CLAUSE: 4.4.9
CLASSIFICATION: Technical

DESCRIPTION:

The second paragraph of the definition of representation describes the relationship of representation_items to a context as the basis for relating representation_items. This paragraph does not take the representation_item_relationship into account. How does the representation_item_relationship work with the association of items within contexts? What does this statement mean with respect to the inclusion of the representation_item_relationship?

PROPOSED SOLUTION: (optional)

Define the semantics of the different interactions of representation, representation_context, representation_item and representation_item_relationship.

RESOLUTION:

ISSUE NUMBER: USA-43E2-5
AUTHOR: USA
CLAUSE: 4.4.9
CLASSIFICATION: Technical

DESCRIPTION:

The third paragraph of the definition of representation describes how representation_items are related to representation_contexts, but does not mention the role of the founded_item with respect to its relationship to a representation_item or a representation_item?s relationship to the founded_item.

PROPOSED SOLUTION: (optional)

Add a discussion of founded_item into the normative text

where appropriate.

RESOLUTION:

ISSUE NUMBER: USA-43E2-6
AUTHOR: USA
CLAUSE: 4.4.12
CLASSIFICATION: Technical

DESCRIPTION:

There is no description on how the
representation_item_relationship interacts
with the representation/representation_context system for
founding items and defining a context for their comparison
in representation space.

PROPOSED SOLUTION: (optional)

Define the contextual factors in determining the relationship
between the two representation_items being related by this
entity.

RESOLUTION:

ISSUE NUMBER: USA-43E2-7
AUTHOR: USA
CLAUSE: 4.4.14
CLASSIFICATION: Technical

DESCRIPTION:

The example in figure 3 is an example of the
representation_relationship_with_transformation.
It should be used for that entity data type.

PROPOSED SOLUTION: (optional)

Move the current example to 4.4.15. An example of a
representation_relationship without a transformation
should be written for 4.4.14

RESOLUTION:

ISSUE NUMBER: USA-43E2-8
AUTHOR: USA
CLAUSE: 4.4.17
CLASSIFICATION: Technical

DESCRIPTION:

The second sentence of the uncertainty_measure_with_unit
states that the uncertainty applies to every representation_item
that has the same type of measure_value. This statement is
only true within a certain context (e.g. the items in a
representation with a global_uncertainty_assigned_context).
Additionally, there are precedence rules for the use of this

entity with the uncertainty concepts defined in Part 45.

PROPOSED SOLUTION: (optional)

Clarify the context for the application of the uncertainty_measure_with_unit.

RESOLUTION:

ISSUE NUMBER: USA-43E2-9
AUTHOR: USA
CLAUSE: 4.4.16
CLASSIFICATION: Technical

DESCRIPTION:

The precedence rules described in 4.4.6 should not be necessary for the uncertainty_assigned_representation vs. a representation with a global_uncertainty_assigned_context. The two concepts should be completely orthogonal. That is, a representation that is an uncertainty_assigned_representation should not be able to have a global_uncertainty_assigned_context.

PROPOSED SOLUTION: (optional)

Include a domain rule in the uncertainty_assigned_representation to disallow the use of a global_uncertainty_assigned_context as the context_of_items.

RESOLUTION:

ISSUE NUMBER: USA-43E2-10
AUTHOR: USA
CLAUSE: Foreword third paragraph
CLASSIFICATION: Technical

DESCRIPTION:

The current Foreword says that this second edition cancels and replaces the 1994 IS edition of this IR. The 1994 IS edition needs to remain a valid standard as it is referenced by existing IS APs and APs and IRs under development.

PROPOSED SOLUTION: (optional)

Change the text in the Foreword so that the end result is not the cancellation and replacement of the 1994 IS.

RESOLUTION: